

Product Evaluation

SHU183 | 0522

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: SHU-183

Effective Date: May 1, 2022

Re-evaluation Date: May 2026

Product Name: Accordion Shutters with Either Aluminum or Polycarbonate Blades

Manufacturer: Impact Technology, Inc.
1114 SE 12 Court
Cape Coral, FL 33990
(786) 367-8740

General Description:

The accordion shutters are manufactured from extruded aluminum. The accordion shutters are assembled using interlocking extruded 6063-T6 aluminum standard blades that are nominal 4" x 0.052" thick or polycarbonate window blades that are nominal 4" x 0.090". The shutters may be installed to several different types of wall construction using several mounting conditions. The overall height of the shutter assembly can be increased using support beams. The shutters are a permanently mounted impact protective system.

Design Drawings:

"Accordion Shutter with Aluminum or Polycarbonate Blades;" manufactured by Impact Technology, Inc.; Drawing No. 21-48584; Sheets 1–13 of 13; dated January 5, 2022; drawing signed, sealed, and dated January 20, 2022, by Frank L. Bennardo, P.E. The stated drawings will be referred to as approved drawings in this evaluation report.

Limitations:**Accordion Blade Configurations:**

- Aluminum blades
- Polycarbonate blades
- Combination of aluminum and polycarbonate

Mounting Conditions:

- Wall Mount
- Trap Mount
- Alternate Wall Mount
- Build-Out
- Combination of the above

Wall Construction: The roll-up shutters may be mounted to the following types of wall framing:

- Pre-cast concrete, cast-in-place concrete (minimum compressive strength required specified in drawings)
- Hollow concrete masonry units (CMU)
- Wood (minimum Southern Yellow Pine dimension lumber, S.G. = 0.55).

Design Pressure Rating:

The allowable design pressure, as a function of slat span, and type of blade (aluminum or polycarbonate) ranges from +25.5 psf / -41.6 psf to ± 152.5 psf. Refer to approved drawings for specific design pressure requirements.

The allowable design pressures, as a function of anchors, connection type, and support beam, are specified on the approved drawings.

Maximum Shutter Width: The width of the shutter is not limited.

Maximum Slat Span: The allowable slat span is a function of design pressure rating for the slats. The maximum slat span is 162". Refer to the Allow Span Schedule in the approved drawings for specific slat span requirements.

Support Beams: The accordion shutters may be installed using support beams to increase the overall height of the assembly. The allowable height of the shutters between support beams is the maximum slat spans as specified in the approved drawings. The allowable design pressure of the assembly using support beams is specified in the approved drawings.

Minimum Separation from Glass: The minimum glazing separation from glass is specified on the approved drawings.

Product Identification: The shutter assembly must have a permanent label that identifies the manufacturer (Impact Technology, Inc.); the name of the product (Accordion Shutters w/

Aluminum or Polycarbonate Blades); the test standards (TAS 201, TAS 202, TAS 203); and the missile level (Large Missile Impact Rated).

Compliance: The shutters comply with ASTM E 330-14, ASTM E 1886-13a, and ASTM E 1996-14a.

Impact Resistance: This shutter assembly satisfies the Texas Department of Insurance's criteria for protection from windborne debris. The assembly passed the equivalent of Missile Level D as specified in ASTM E 1996-14a. The assembly may be installed at any height on the structure as long as the design pressure rating for the assembly is not exceeded. On essential facilities, the shutter assembly may be installed at heights above 30 feet in Wind Zone 3 and may be used at any height in Wind Zone 2 as defined in ASCE 7-16 and ASTM E 1996-14a.

Installation:

General Installation Requirements: The accordion shutters must be installed in accordance with the manufacturer's installation instructions, the approved drawings, and this product evaluation report.

A copy of the approved drawing must be available on the jobsite during inspection of the shutter assembly.

Anchorage: The accordion shutters must be anchored to the structure in accordance with the approved drawings. Anchorage of the accordion shutters to concrete, hollow concrete masonry units (CMU), and wood wall framing must follow the mounting conditions, fastener options, and wall construction requirements specified in the approved drawings.

Note: Keep the manufacturer's installation instructions available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.